RECORDS AND DESCRIPTIONS OF NEOTROPICAL CRANE-FLIES (TIPULIDÆ, DIPTERA), XXVI

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The preceding article under this general title was published in the Journal of the New York Entomological Society, 59: 99–110; 1951. The materials discussed at this time are from Grenada, taken by Noël L. H. Krauss; Venezuela, by Jenaro Maldonado Capriles; Ecuador, by Segundo Velastegui; Peru, by José M. Schunke; and especially in Bolivia and Chile, taken by Luis E. Peña. I am greatly indebted to the various collectors for the privilege of retaining the types of the various novelties.

Genus Hexatoma Latreille

Hexatoma (Eriocera) maldonadoi new species

General coloration brownish gray, the præscutum with four darker brown stripes; antennæ (male) very long, approximately three times the wing; wings with a weak brownish tinge, the stigma darker; vein R_2 at or before the fork of R_{3+4} ; cell 1st M_2 small, subrectangular; valves of ovipositor elongate.

Male. Length about 8-9 mm.; wing 9.5-11 mm.; antenna about 29-31 mm.

Female. Length about 10-11 mm.; wing 8.5-10 mm.; antenna about 1.5-1.6 mm.

Mouthparts very reduced, black. Antennæ (male) very long, approximately three times the wing; basal segments brown, the outer ones black; flagellar segments very long-cylindrical, provided with small scattered emergence bristles, these lacking on the even more attenuated outer segments. In female, antennæ 9-segmented, the segments gradually decreasing in length outwardly; flagellar segments four to six, inclusive, more nearly equal. Head brownish gray, the vertex in male very bulbous, entire, in female less developed.

Pronotum brown. Mesonotum brownish gray, the præscutum with four darker brown stripes; interspaces with long erect pale setæ; scutum weakly darkened. Pleura brownish gray. Halteres dark brown, the base of stem restrictedly brightened. Legs with the coxæ brown, sparsely pruinose; trochanters brown; remainder of legs brown, the femoral tips vaguely brightened. Wings with a weak brownish tinge, cells C and Sc a trifle more

infuscated; stigma oval, still darker brown; veins brown. Veins unusually glabrous, with a series of trichia over most of the length of distal section of vein R_5 . Venation: Sc_1 ending shortly beyond level of r-m, Sc_2 a short distance from its tip; R_{1+2} and R_2 subequal, the latter at or before the fork of R_{3+4} , in some specimens just beyond this fork; veins beyond cell 1st M_2 pale to subevanescent, the cell small, short-subrectangular; m-cu longer than the distal section of Cu_1 ; vein 2nd A nearly straight.

Abdomen brown, the outer segments, including the hypopygium, darker brown; posterior borders of the more proximal segments narrowly darkened. Valves of ovipositor elongate.

Habitat. Venezuela.

Holotype, &, Camp Benitez, Marahuaca Region, foot of Pacaraima Mountains, May 1950 (Jenaro Maldonado Capriles). Allotopotype, Q. Paratopotypes, 16&Q.

I am very pleased to name this distinct fly for the collector, Mr. Jenaro Maldonado Capriles, to whom I am indebted for specimens of Tipulidæ from Puerto Rico and Venezuela. The species is quite distinct from all other regional members of the subgenus, including Hexatoma (Eriocera) antennata (Alexander) and H. (E.) macrocera (Alexander), in the details of venation.

Genus Teucholabis Osten Sacken

Teucholabis (Teucholabis) xantha new species

General coloration pale reddish yellow, the præscutum in cases with a weak median darkening on extreme cephalic portion; halteres and legs yellow; no modifications of posterior tibiæ of male; wings with Sc relatively long, cell R_4 at margin more extensive than cell R_2 , cell M_2 open by the atrophy of the basal section of M_3 ; male hypopygium with the inner dististyle appearing as a large triangular darkened blade, without setæ; ædeagus large, its apex obtuse.

Male. Length about 4.8-5 mm.; wing 5.3-5.5 mm.

Female. Length about 5 mm.; wing 5-5.1 mm.

Rostrum and palpi yellow. Antennæ with the scape and pedicel brown, the latter a trifle darker; flagellum light brown, the segments oval with very long verticils. Head yellow.

Pronotum and pretergites uniformly yellow. Mesonotum pale reddish yellow, unmarked or with a weak median infuscation on extreme cephalic portion of præscutum. Pleura and pleurotergite more yellowed. Halteres yellow. Legs yellow, the terminal tarsal segments more darkened; posterior leg of male unmodified, lacking in glandular area on the basitarsus. Wings yellow, including the veins; stigma very small, pale brown. Venation: Sc relatively long, Sc_1 ending at about two-fifths the length of Rs, Sc_2 a short distance from its tip; vein R_4 nearly straight, R_5 on apical half bent

very strongly caudad to the wing-tip, cell R_4 at margin more extensive than cell R_2 ; cell M_2 open by atrophy of basal section of M_3 ; m-cu nearly one-third to one-half its length beyond the fork of M.

Abdomen obscure yellow, including the hypopygium; in the female, tergites indistinctly bicolored, the bases of the segments weakly darkened, a little less extensive than the yellow apices. Abdomen of male without modified sternal pockets. Male hypopygium with the appendage of basistyle subapical, pale, the entire inner margin fringed with long pale setæ; on mesal face of style near base with a much stouter and only slightly shorter fleshy lobe that is provided with scattered strong setæ. Outer dististyle a long slender rod that is gently curved and narrowed to the tip. Inner dististyle of distinctive shape, appearing as a large triangular darkened blade, without setæ. Aedeagus large and pale, its apex obtuse, both the upper and lower margins of the apical portion with rather numerous pale setæ.

Habitat. Bolivia.

Holotype, β, Rio Yapacani, Buena Vista, Santa Cruz, August 10, 1950 (L. E. Peña). Allotopotype, Q, pinned with the type. Paratypes, 1 β, 1 Q, Ichilo, Puerto Greether, August 20, 1950 (L. E. Peña).

Teucholabis (Teucholabis) xantha is quite distinct from the most similar species, including Teucholabis (T.) omissinervis Alexander, in the very distinct male hypopygium.

Genus Molophilus Curtis

Molophilus melanoleucus new species

General coloration of thorax pale buffy yellow, abdomen abruptly brownish black, the genital segment yellow; legs brown to black, the proximal two tarsal segments white with darkened tips; no modified setal brushes on tibiæ; wings with a strong blackish tinge, cells M and M_4 more evidently whitened; Rs relatively short, about twice the unusually long basal section of R_{4+5} ; vein R_2 lying unusually basad, about two-thirds R_{2+3+4} .

Female. Length about 3.5 mm.; wing 4 mm.

Rostrum and palpi brown. Antennæ dark brown; flagellar segments oval, well-constricted, with very long conspicuous verticils. Head brown.

Thorax uniformly pale buffy yellow. Halteres black. Legs with the coxæ and trochanters yellow; femora brown, the tips narrowly yellow; tibiæ brown, the bases narrowly yellow; basitarsi white, the tips blackened, on some legs including more than the outer half; second tarsal segment white, the tip and remaining segments black; legs with abundant long coarse setæ that conform in color to the part of the leg where found; no modified brushes on tibiæ. Wings with a strong blackish tinge, cells M and M_4 , more evidently whitened; veins brown, macrotrichia dark brown. Venation: Rs relatively short, about twice the unusually long basal section of R_{4+5} and in

alignment with it; R_2 unusually basad, about two-thirds R_{2*3*4} ; petiole of cell M_3 approximately four times m-cu; cell 2nd A relatively narrow.

Abdomen brownish black, the genital segment yellow. Ovipositor evidently broken, the cerci lost.

Habitat. Grenada.

Holotype, ♀, Grand Etang, November 1950 (Noël L. H. Krauss).

This very distinct fly apparently belongs to the subgenus Eumolophilus Alexander and would seem to be most nearly allied to Molophilus (Eumolophilus) thaumastopodus Alexander, despite the lack of modified setal brushes on the tibiæ, as found in other known species of the subgenus. The discovery of the male sex will determine the subgeneric position. Additional to the character above discussed, the fly is very different from all regional members of the genus in the coloration, venation, and pattern of the legs.

Molophilus (Molophilus) avitus new species

Belongs to the plagiatus group; mesonotum reddish brown, the præscutum restrictedly darkened medially in front; antennæ (male) elongate, exceeding one-third the length of wing; flagellar segments with a dense erect white pubescence and long unilaterally arranged verticils; wings tinged with brown; vein 2nd Δ long, sinuous, ending beyond midlength of the petiole of cell M_3 ; male hypopygium with the basal dististyle a long gently curved to nearly straight rod, the outer end feebly dilated, set with numerous slender spines.

Male. Length about 4.5 mm.; wing 4.8 mm.; antenna about 1.8 mm.

Rostrum brown; palpi black. Antennæ (male) elongate, exceeding one-third the wing, brown throughout; flagellar segments long-oval, with a dense erect white pubescence and very long unilaterally arranged verticils, the latter on the more proximal segments exceeding twice the length of the latter. Head dark brown, sparsely pruinose.

Pronotum pale brown, the pretergites testaceous yellow. Mesonotum reddish brown, the præscutum restrictedly darkened medially in front. Pleura medium brown, the dorsopleural region a little darker. Halteres with stem dusky, knob slightly yellowed. Legs with the coxæ and trochanters yellow; femora and tibiæ obscure brownish yellow, brighter basally; tarsi darker brown. Wings tinged with brown, the stigmal region diffusely more darkened; veins and macrotrichia darker brown. Venation: R_2 nearly in alignment with r-m; m-cu about one-half the petiole of cell M_3 ; vein 2nd A long, sinuous, ending beyond midlength of the petiole of cell M_3 .

Abdomen, including hypopygium, brown. Male hypopygium with the beak of the basistyle slender. Outer dististyle unequally bilobed, the longest or inner arm slender, the outer one with the margin microscopically toothed.

Basal dististyle a long gently curved to nearly straight rod, narrowest beyond the base, gently widened outwardly, the feebly dilated outer end set with numerous slender black spines; outer margin of style almost to the base with microscopic appressed denticles; outer margin near the beginning of the spinous head with a small lobule, not indicated on one style of the holotype and presumably broken. Phallosome glabrous, the apex broadly obtuse to truncate.

Habitat. Ecuador (Tungurahua).

Holotype, & Upper Rio Topo, altitude 1500 meters, February 1949 (Segundo Velastegui, through Macintyre).

The present fly is most similar to species such as Molophilus (Molophilus) lictor Alexander, M. (M.) sublictor Alexander, and M. (M.) panchrestus Alexander, differing especially in the structure of the male hypopygium, particularly the basal dististyle.

Molophilus (Molophilus) planitas new species

Belongs to the *plagiatus* group; general coloration brownish gray, pleura plumbeous; antennæ moderately long, flagellar segments fusiform, with an abundant dense white pubescence; male hypopygium with the basal dististyle a long gently curved rod, terminating abruptly in an acute spine, the lower margin for virtually the whole length with a dense row of appressed spines and long black setæ.

Male. Length about 4 mm.; wing 4.5 mm.; antenna about 1.2 mm.

Rostrum brown; palpi brownish black. Antennæ with scape testaceous, remaining segments dark brown; antennæ (male) moderately elongate flagellate segments fusiform, with an abundant dense white pubescence and somewhat longer black verticils. Anterior part of head brown, the posterior vertex grayish.

Pronotum brownish gray. Mesonotum chiefly brownish gray, the pretergites and restricted humeral region more whitened. Pleura dark plumbeous. Halteres broken. Legs with the coxæ and trochanters obscure yellow, the fore coxæ darker; remainder of legs brown, the tarsi black. Wings tinged with brown, the prearcular and costal fields more yellowed; veins brownish yellow; macrotrichia brown. Venation: R_2 opposite r-m; petiole of cell M_3 about twice m-cu; vein 2nd A moderately sinuous, terminating nearly opposite the posterior end of m-cu.

Abdomen dark brown, the hypopygium more yellowed. Male hypopygium with the beak of the basistyle relatively slender, blackened. Outer dististyle with the arms unequal, the inner more slender and a little longer. Basal dististyle appearing as a long, gently curved rod that terminates abruptly in an acute spine, the lower margin for virtually the entire length with dense appressed blackened spines, interspersed with longer black setæ, the latter more conspicuous on the basal part. Phallosome glabrous, its apex very obtuse.

Habitat. Bolivia.

Holotype, &, Cristal Mayu, altitude 1200 meters, August 24, 1949 (L. E. Peña).

There are rather numerous species in Tropical America that have the male hypopygium of the general type of the present fly yet are quite distinct in all details. Such allied species include Molophilus (Molophilus) brownianus Alexander, M. (M.) capricornis Alexander, M. (M.) carpishensis Alexander, M. (M.) flemingi Alexander, M. (M.) illectus Alexander, M. (M.) luxuriosus Alexander, M. (M.) pennatus Alexander, and M. (M.) remiger Alexander.

Molophilus (Molophilus) pertenuis new species

Belongs to the plagiatus group; size relatively small (wing, male, about 4 mm.); antennæ short; general coloration dark gray, the pretergites restrictedly pale yellow; wings with a strong brownish tinge; petiole of cell M_3 relatively short, a little longer than m-cu; abdomen, including hypopygium, brownish black; male hypopygium with the beak of the basistyle slender; basal dististyle an unusually long and slender rod, bearing a conspicuous spine on the outer margin at near the basal fifth; approximately the outer half of lower margin of style with a row of closely applied spines or teeth.

Male. Length about 3.5-3.6 mm.; wing 4-4.2 mm.; antenna about 1.2-1.3 mm.

Rostrum and palpi black. Antennæ relatively short; scape and pedicel brownish yellow, flagellum brown; flagellar segments subcylindrical, less than one-half as long as the verticils. Head gray.

General coloration dark gray, the pretergites restrictedly pale yellow. Halteres yellow. Legs with the coxe brownish testaceous; trochanters obscure yellow; remainder of legs brown, the outer tarsal segments darker brown. Wings with a strong brownish tinge, the prearcular field restrictedly more yellowed; veins brown, trichia darker brown. Venation: R_2 about in transverse alignment with r-m; petiole of cell M_3 relatively short, a little longer than m-cu; vein 2nd A only gently sinuous, ending about opposite the posterior end of m-cu.

Abdomen, including the hypopygium, brownish black. Male hypopygium with the beak of the basistyle slender, blackened. Outer dististyle with the arms unequal, the outer shorter and broader, the inner arm slightly expanded at near midlength. Basal dististyle an unusually long and slender gently curved rod, the tip a strong spinous point; outer margin at near the basal fifth with a strong acute spine; about the outer half of style along the lower margin with a row of closely applied spines or teeth, extending to the base of the apical point. Phallosome glabrous, very obtuse at apex. Aedeagus long and slender.

Habitat. Peru.

Holotype, &, Chanchamayo, Junin, altitude 1100 meters, February 12, 1949 (José M. Schunke). Paratopotypes, 2&&, pinned with the type.

The closest allies of the present fly are species such as Molophilus (Molophilus) flexistylus Alexander and M. (M.) sicarius Alexander, which differ in all details of coloration and in the structure of the male hypopygium.

Molophilus (Molophilus) setosistylus new species

Belongs to the *plagiatus* group, *flavidus* subgroup; general coloration dark brown; head gray; male hypopygium with the outer arm of the basal dististyle slender, the outer third dilated, terminating in a long spine; inner margin of the expanded portion with a dense brush of dark setæ but without spines; inner arm slender, its outer margin at near midlength with about five or six spines, the outermost longest.

Male. Length about 4.5 mm.; wing 5 mm.; antenna about 1.5 mm.

Rostrum brown; palpi brownish black. Antennæ brownish black, the scape and pedicel a little paler; flagellar segments long-oval, with long, unilaterally arranged verticils on the more proximal segments, additional to a long outspreading pubescence. Head gray.

Pronotum brown, the pretergites more yellowed. Mesonotum dark brown, sparsely pruinose, the humeral region of the præscutum slightly more brightened. Pleura dark brown, sparsely pruinose; dorsopleural membrane yellow. Halteres yellow. Legs with the coxæ and trochanters testaceous yellow; remainder of legs brownish yellow, the tarsi darker brown; dilated darkened ring on base of fore tibia of male conspicuous. Wings with a weak brownish tinge, the prearcular field a very little brightened; veins brown, the macrotrichia darker brown. Venation: R_2 lying slightly distad of the level of r-m; petiole of cell M_3 relatively short, only a little longer than the oblique, feebly sinuous m-cu; vein 2nd A long, sinuous, ending a short distance beyond the level of m-cu.

Abdomen, including hypopygium, dark brown. Male hypopygium with the beak of the basistyle long and slender, blackened, curved to the acute tip. Outer dististyle with the arms very unequal in shape, the inner a gently curved fingerlike rod. Basal dististyle profoundly bifid, as in the subgroup; outer arm slender basally, with about the outer third or more dilated, thence narrowed to a long straight apical spine; inner margin of the dilated portion with abundant delicate blackened setæ, forming a dense brush; inner arm about two-thirds as long, appearing as a slender rod that terminates in a long acute spine, the outer margin at near midlength with five or six spines, the outermost longest.

Habitat. Chile.

Holotype, J, Termas Rio Blanco, Malleco, altitude 1050 meters,

March 5-27, 1951 (L. E. Peña).

By my key to the Chilean species of *Molophilus* (Diptera of Patagonia and South Chile, Part 1: 200–202; 1929), the present fly runs to *Molophilus* (*Molophilus*) inflexibilis Alexander, which has the details of the male hypopygium quite distinct.

Molophilus (Molophilus) sparsispinus new species

Belongs to the *plagiatus* group, *flavidus* subgroup; general coloration of mesonotum brownish yellow; head orange-yellow; thoracic pleura with a broad dusky dorsal stripe, the ventral pleurites obscure yellow; male hypopygium with the beak of the basistyle long and slender, its tip decurved; basal dististyle profoundly bifid, the outer arm provided with unusually few spines, those of the outer third about ten in number, all on the outer face; inner arm with about two small spinules on outer face beyond midlength; style without setæ.

Male. Length about 5 mm.; wing 5.8 mm.; antenna about 1.5 mm.

Rostrum testaceous brown; palpi black. Antennæ with scape and pedicel yellow, flagellum passing through brown to black; flagellar segments long-oval, with long white pubescence and very long verticils on the more proximal segments. Head orange yellow.

Pronotum chiefly yellow; pretergites whitish yellow. Mesonotum brownish yellow, the humeral region of præscutum more brightened; posterior half of mediotergite infuscated. Pleura with a broad dusky dorsal stripe extending from the cervical region to the postnotum, as described; ventral pleurites obscure yellow. Halteres yellow. Legs with the coxæ and trochanters yellow; femora yellow basally, more infuscated on outer portion, the extreme tip again brightened; tibiæ yellow, the tips narrowly infuscated; subbasal darkened ring of fore tibia of male conspicuous; tarsi brown. Wings tinged with brownish yellow, the prearcular and costal fields clearer yellow; veins brownish yellow, macrotrichia brown. Venation: R_2 lying shortly distad of level of r-m; petiole of cell M_3 short, about one-third longer than m-cu; vein 2nd A ending shortly beyond m-cu.

Abdomen brown, the hypopygium a trifle more brightened. Male hypopygium with the beak of the basistyle unusually long and slender, blackened, the outer third decurved to the acute tip. Outer dististyle relatively short, its outer arm a gently curved black spine. Basal dististyle profoundly bifid, as in the subgroup; outer arm longest, provided with unusually few spines, those of the outer third about ten in number, all restricted to the outer face, the outer spines larger; basal half of arm with smaller spiculose points or roughenings; inner face of arm entirely glabrous; inner arm about two-thirds as long, terminating in a long simple spine, with about two smaller spinules on outer face beyond midlength; no setæ on style.

Habitat. Chile.

Holotype, &, Termas Curacautin, Malleco, altitude 400 meters, December 6-25, 1950 (L. E. Peña).

In the nature of the basal dististyle of the male hypopygium, the present fly is most similar to *Molophilus* (*Molophilus*) breviramus Alexander and M. (M.) serrulatus Alexander, differing in the details of armature of the style.

Molophilus (Molophilus) isolatus new species

Belongs to the *plagiatus* group; general coloration of thorax brown, including the disk of the præscutum; male hypopygium with the beak of the basistyle unusually stout, its apex blunt to subtruncate; basal dististyle a heavily blackened structure that narrows gradually into a long apical spine, the outer margin provided with about five spinous points, the two subbasal ones stoutest, the subapical pair small and slender; phallosome setiferous, conspicuously emarginate.

Male. Length about 4.8 mm.; wing 5.4 mm.; antenna about 1.3 mm.

Rostrum dark brown; palpi black. Antennæ (male) relatively long, approximately one-fourth the body length; basal segments obscure yellow, the flagellum dark brown, with unusually long erect white pubescence; verticils of the more proximal segments elongate. Head gray.

Pronotum dark brown, more yellowed behind; pretergites light yellow. Mesonotal præscutum with the disk brown, the humeral and lateral portions yellow; posterior sclerites of notum chiefly brown, the posterior angles of scutal lobes, caudal border of scutellum and sutures of the postnotum more yellowed. Pleura brown. Halteres weakly infuscated, the base of stem narrowly pale. Legs with the coxæ and trochanters yellow, fore coxæ a little darker; remainder of legs brownish yellow, the outer tarsal segments brownish black. Wings with a weak brownish yellow tinge, the prearcular and costal fields clearer yellow; veins brownish yellow, trichia brown. Venation: R_3 lying a short distance beyond the level of r-m; petiole of cell M_3 less than twice m-cu; vein 2nd A ending about opposite one-fourth the length of petiole of cell M_3 .

Abdomen, including hypopygium, dark brown. Male hypopygium with the beak of the basistyle unusually stout, its apex blunt to subtruncate. Outer dististyle with the arms very unequal, the outer a slender rod, the inner twisted at apex. Basal dististyle distinctive, appearing as a blackened structure that narrows gradually to a long apical spine, the outer margin provided with about five spinous points, the two subbasal ones stoutest, the subapical pair small and slender. Phallosome conspicuously setiferous, emarginate, the notch broad, the lobes correspondingly narrow.

Habitat. Chile.

Holotype, &, Termas Rio Blanco, Malleco, altitude 1050 meters, March 5-27, 1951 (L. E. Peña).

The most similar described species is Molophilus (Molophilus)

perfidus Alexander, which has the male hypopygium quite different in structure.

Molophilus (Molophilus) echo new species

Belongs to the *plagiatus* group; general coloration dark brown, more or less pruinose; male hypopygium with the beak of the basistyle slender; basal dististyle appearing as a blackened rod, beyond midlength forking into two unequal spines, the outer or axial arm stouter, the lateral or inner spine shorter and more slender; phallosome hairy, its apex shallowly emarginate.

Male. Length about 4 mm.; wing 4.5 mm.; antenna about 1.2 mm.

Female. Length about 5 mm.; wing 5.5 mm.

Rostrum and palpi black. Antennæ brownish black, the scape a little paler; flagellar segments suboval, narrowed at outer end; verticils of the more proximal segments very long. Head brownish gray.

Pronotum dark brown, the scutellum and pretergites obscure yellow. Mesonotum chiefly dark brown, more or less pruinose; humeral region of præscutum and posterior border of scutellum more reddened. The paratype has the body coloration much clearer brown, without the marked gray pruinosity of the type. Pleura more heavily pruinose. Halteres yellow. Legs with the coxæ testaceous; trochanters yellow; remainder of legs brown, the outer segments darker; modified subbasal ring of fore tibia of male conspicuous but scarcely differentiated in color. Wings tinged with brownish yellow, the prearcular and costal regions clearer yellow; veins pale brown, clearer yellow in the brightened fields; macrotrichia brown. Venation: R_2 lying a short distance beyond the level of r-m; petiole of cell M_3 about one-third longer than m-cu; vein 2nd A long and sinuous, ending a short distance beyond m-cu.

Abdomen dark brown, the hypopygium a trifle brighter. Male hypopygium with the beak of the basistyle slender, on one style of the paratype abnormal, distinctly split to form two points. Outer dististyle with the outer arm flattened, its inner apical angle produced into a small point. Basal dististyle appearing as a blackened rod, beyond midlength forking into two unequal spines, the outer or axial arm stouter, the lateral one shorter and more slender. Phallosome hairy, the apex shallowly emarginate.

Habitat. Chile.

Holotype, &, Termas Rio Blanco, Malleco, March 5-27, 1951 (L. E. Peña). Allotype, Q, Termas Curacautin, Malleco, altitude 400 meters, December 10, 1950 (L. E. Peña). Paratype, 1 &, with the allotype.

In the structure of the male hypopygium, the present fly is most like Molophilus (Molophilus) diceros Alexander and M. (M.) furcus Alexander, differing conspicuously in the shape of the basal dististyle.